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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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January 28, 2016

16-NWP-017

Mr. Kevin W. Smith, Manager
Office of River Protection
United States Department of Energy
PO Box 450, MSIN: H6-60
Richland, Washington 99352

Ms. Peggy McCullough, Project Director
Bechtel National, Inc.
2435 Stevens Center Place, MSIN: H4-02
Richland, Washington 99354

Re: Approval of 24590-LAW-PCN-ENV-14-005, Class ¹1 Modification to the *Hanford Facility Resource Conservation and Recovery Act Permit, Dangerous Waste Portion, Revision 8C, for the Treatment, Storage, and Disposal of Dangerous Waste*, Part III, Operating Unit Group 10, Waste Treatment and Immobilization Plant (WTP Permit), WA7890008967

Reference: See page 2

Dear Mr. Smith and Ms. McCullough:

The Department of Ecology approves the referenced Class ¹1 Modification. The approved Hanford Facility RCRA Permit Modification Notification Form is enclosed.

This modification provides the updated Piping and Instrumentation Diagrams (P&IDs) for the Low-Activity Waste Secondary Offgas/Vessel Vent Process System. These P&IDs are listed on the enclosure and replace the corresponding permit P&IDs in Appendix 9.2 of the WTP Permit.

If there are any questions, please contact Nitya Chandran, WTP Permit Writer, at nitya.chandran@ecy.wa.gov or (509) 372-7931.

Sincerely,

Suzanne Dahl
Tank Waste Treatment Section Manager
Nuclear Waste Program

nc/jt
Enclosure

cc: See page 2



Mr. Smith and Ms. McCullough
January 28, 2016
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Reference: Letter 15-ECD-0057, received November 19, 2015, from R.G. Hastings, USDOE-ORP, to J.A. Hedges, Ecology, "Submittal of Hanford Facility Resource Conservation and Recovery Act Permit Modification Notification Form 24590-LAW-PCN-ENV-14-005 Replace Piping and Instrumentation Diagrams for the Low-Activity Waste Secondary Offgas/Vessel Vent Process System"

cc electronic w/enc:

Dave Bartus, EPA
Dennis Faulk, EPA
Jan Bovier, USDOE
Mary Beth Burandt, USDOE
Cliff Clark, USDOE
Joanne Grindstaff, USDOE
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Suzanne Dahl, Ecology
Tracy Gao, Ecology
Mandy Jones, Ecology
Dan McDonald, Ecology
Stacy Nichols, Ecology
John Richardson, Ecology
Oliver Wang, Ecology
BNI Correspondence Control
Environmental Portal
Hanford Facility Operating Record
USDOE-ORP Correspondence Control

cc w/enc:

Russell Jim, YN
Steve Hudson, HAB
Administrative Record: Waste Treatment Plant (TSD #H-0-8)
NWP Central File

cc w/o enc:

Rod Skeen, CTUIR
Gabriel Bohnee, NPT
NWP Reader File

Quarter Ending Dec. 31, 2015

24590-LAW-PCN-ENV-14-005

Hanford Facility RCRA Permit Modification Notification Form
Part III, Operating Unit 10
Waste Treatment and Immobilization Plant

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Page 2 of 3: Hanford Facility RCRA Permit, Part III, Operating Unit 10, Waste Treatment and Immobilization Plant

Replace Piping and Instrumentation Diagrams (P&IDs) for the LAW Secondary Offgas/Vessel Vent Process System (LVP) in Appendix 9.2 of the Dangerous Waste Permit (DWP).

Submitted by Co-Operator:

Roger J. Landon 10/8/15
Roger J. Landon Date

Reviewed by ORP Program Office:

Joanne Grindstaff 11/9/15
J. F. Grindstaff Date

Quarter Ending Dec. 31, 2015

24590-LAW-PCN-ENV-14-005

Hanford Facility RCRA Permit Modification Notification Form

Unit:

Waste Treatment and Immobilization Plant

Permit Part:

Part III, Operating Unit 10**Description of Modification:**

The purpose of this Class 1 prime modification is to update and replace the following P&IDs in Appendix 9.2 of the DWP:

Appendix 9.2			
Replace:	24590-LAW-M6-LVP-00002006, Rev. 0	With:	24590-LAW-M6-LVP-00002006, Rev. 1 24590-LAW-M6-LVP-00002007, Rev. 0
	24590-LAW-M6-LVP-00004001, Rev. 0		24590-LAW-M6-LVP-00004001, Rev. 1
	24590-LAW-M6-LVP-00004002, Rev. 0		24590-LAW-M6-LVP-00004002, Rev. 1
	24590-LAW-M6-LVP-00004003, Rev. 0		24590-LAW-M6-LVP-00004003, Rev. 1

This modification requests Ecology approval and incorporation into the permit the specific changes to the P&IDs indicated by revision notes and clouds. These documents include changes provided in applicable document change forms (e.g., DCN, SCN, SDDR, FCN, FCR, etc.). In addition, the P&IDs include changes associated with the resolution to comments on change documents since the issuance of the last revision of the permitted documents.

Significant changes common to all P&IDs are summarized below:

- Modified, added, and deleted notes.
- Incorporated changes from change documentation identified in the Notes section on each drawing.

Significant changes specific to:

24590-LAW-M6-LVP-00002006, Rev. 1 and 24590-LAW-M6-LVP-00002007, Rev. 0

- Converted drawing 24590-LAW-M6-LVP-00002006, Rev. 0, from a single sheet to multi-sheet drawings to provide a clearer representation of the system, including additional details for instrumentation and control logic. 24590-LAW-M6-LVP-00002007, Rev. 0, is a new drawing. No revision clouds were used.
- Added nozzles (Grids B3 through B7) and a Nozzle Schedule (Grids H7 and H8; 24590-LAW-M6-LVP-00002006, Rev. 1).
- Added Continuous Emissions Monitoring System (CEMS) Panels SDJ-PNL-00125 and SDJ-PNL-00126 and revised SDJ-PNL-00062 and SDJ-PNL-00124 (Grids C3, C4, C6 and C7; 24590-LAW-M6-LVP-00002006, Rev. 1).
- Provided additional details of the Stack Discharge Monitoring System (SDJ) (24590-LAW-M6-LVP-00002007, Rev. 0).
- Updated information on heat trace instrumentation for AW 2112 and AW 2121 (Grids B5, C5, B7 and C7; 24590-LAW-M6-LVP-00002007, Rev. 0).
- Updated mass flow controllers FK 2121A and FK 2121B (Grids F7 and G7; 24590-LAW-M6-LVP-00002007, Rev. 0).
- Corrected tag number SDJ-YI-2112X to SDJ-YA-2112X (Grid H5; 24590-LAW-M6-LVP-00002007, Rev. 0).
- Updated or removed holds on references to off-sheet P&IDs (Grid B2; both drawings).

24590-LAW-M6-LVP-00004001, Rev. 1

- Changed valves LVP-V-01647 and LVP-V-01648 from normally open (NO) to locked open (LO) (Grids C6 and D5).
- Removed AW 0027 (Grids D7 and E7).
- Revised tubing size from 3/8 inch to 1/4 inch (Grids E3, E4, F6 and F7).

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24590-LAW-M6-LVP-00004002, Rev. 1

- Added alarms to AI 0439A and AI 0439B (Grids E3 and E4).
- Revised line numbers containing SS as the pipe class to S11N pipe class (multiple grids).
- Rearranged LVP-SKID-00001, reconfigured sample connections to the skid, deleted the N18 sample connection, and changed sample connection plug valves to ball valves (multiple grids).
- Added S11N 1/2 inch stainless steel tubing breaks (multiple grids).
- Modified nozzles as 1/2 inch blind flanged spare nozzles (multiple grids).
- Added nozzles and lines with diameters of 1 inch and 3 inches (multiple grids).
- Modified depiction of process gas analyzer systems associated with LVP-SKID-00001 by adding sample probe tags, system controllers and instrument service air nozzles (multiple grids).
- Updated references to off-sheet P&IDs (multiple grids).

24590-LAW-M6-LVP-00004003, Rev. 1

- Added S11N 1/2 inch stainless steel tubing breaks and LVP 1/2 inch stainless steel designations on instrument tubing (multiple grids).
- Reconfigured nozzles and added new nozzles N66 and N67 to LVP-ADBR-00001A/B (multiple grids).
- Added 16 inch manways to LVP-ADBR-00001A/B (Grids C5 and F5).
- Modified depiction of the mercury monitor by adding sample probe tags LVP-AW-0423A/0423B and LVP-AE-0423, the analyzer enclosure, and system controller LVP-UC-0423.
- Labeled cross-connection header from LVP-ADBR-00001B to LVP-ADBR-00001A as LVP 18 inch stainless steel (Grid B4).
- Added expansion joint bellows LVP-BLWS-00063 through LVP-BLWS-00065 (Grids D7, F4 and F7).
- Updated references to off-sheet P&IDs (multiple grids).

This PCN updates information in Appendix 9.2 to reflect current design. This DWP component may be re-evaluated to confirm design adequacy. If the re-evaluation results in future design changes, the changes will be reviewed by Ecology in subsequent permit modifications.

The following outstanding change documents have been submitted to Ecology pursuant to Permit Condition III.10.C.9.h and are maintained in the WTP Operating Record:

24590-LAW-M6-LVP-00002006, Rev. 1

- 24590-LAW-M6N-LVP-00125 - provided to Ecology in milk run (CCN 261759)

24590-LAW-M6-LVP-00002007, Rev. 0

- 24590-LAW-M6N-LVP-00119 - provided to Ecology in milk run (CCN 275836)

24590-LAW-M6-LVP-00004002, Rev. 1

- 24590-WTP-SDDR-J-14-00112 - provided to Ecology in milk run (CCN 267884)

In accordance with Permit Condition III.10.C.2.e, this permit modification sent to Ecology may include page changes to the Permit, attachments, and permit application supporting documentation.

WAC 173-303-830 Modification Class:	Class 1	Class 11	Class 2	Class 3
Please mark the Modification Class:		X		

Enter relevant WAC 173-303-830, Appendix I Modification citation number: N/A

Enter wording of WAC 173-303-830, Appendix I Modification citation:

In accordance with WAC 173-303-830(4)(d)(i), this modification notification is requested to be reviewed and approved as a Class 11 modification. WAC 173-303-830(4)(d)(ii)(A) states, "Class 1 modifications apply to minor changes that keep the permit current with routine changes to the facility or its operation. These changes do not substantially alter the permit conditions or reduce the capacity of the facility to protect human health or the environment. In the case of Class 1 modifications, the director may require prior approval."

Quarter Ending Dec. 31, 2015

24590-LAW-PCN-ENV-14-005

Modification
Approved/Concur:☒

Yes

☐

Denied (state reason below)

Reason for denial:

Reviewed by Ecology:



S. Dahl

01/28/16

Date

Table III.10.H.A - LAW Plant Miscellaneous Unit System Description

Sub-system Description	Sub-system Designation	Engineering Description (Drawing Nos., Specification Nos., etc.)	Narrative Description, Tables and Figures
LVP-SCR-00001 (NOx Selective Catalytic Reduction Unit – located on LVP-SKID-00002)			Addendum C of this Permit.
LVP-HX-00001 (Catalytic Oxidizer Heat Exchanger – located on LVP-SKID-00002)			
LVP-HTR-00002 (Catalytic Oxidizer Electric Heater – located on LVP-SKID-00002)			
<u>LAW Secondary Offgas/Vessel Vent Process System (Cont.)</u>	LVP	<u>24590-LAW</u> -M5-V17T-00011, Rev 5 -M6-LVP-00004001, Rev. 01 -M6-LVP-00004002, Rev. 01 -M6-LVP-00004003, Rev 01	Section 4.1.3.3, Table C-8, and Figures C1-1 and C1-3 in Operating Unit Group 10, Addendum C of this Permit.
LVP-ADBR-00001A (Offgas Mercury Adsorber – located on LVP-SKID-00001)			
LVP-ADBR-00001B (Offgas Mercury Adsorber – located on LVP-SKID-00001)			

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Table III.10.H.A - LAW Plant Miscellaneous Unit System Description

Sub-system Description	Sub-system Designation	Engineering Description (Drawing Nos., Specification Nos., etc.)	Narrative Description, Tables and Figures
		-P1-P01T-00005, Rev 4	
<u>LAW Secondary Offgas/Vessel Vent Process System (Cont.)</u> LVP-SCB-00001 (Melter Offgas Caustic Scrubber)	LVP	<u>24590-LAW</u> -P1-P01T-00005, Rev 4 -M6-LVP-00002002, Rev 0 -M6-LVP-00002006, Rev. 01 -M6-LVP-00002007, Rev. 0	Section 4.1.3.3, Table C-8, and Figures C1-1 and C1-3 in Operating Unit Group 10, Addendum C of this Permit.
<u>LAW Secondary Offgas/Vessel Vent Process System (Cont.)</u> LVP-HTR-00001A (Melter Offgas HEPA Preheater) LVP-HTR-00001B (Melter Offgas HEPA Preheater)	LVP	<u>24590-LAW</u> -M5-V17T-00010, Rev 4 -M6-LVP-00001002, Rev 0 -P1-P01T-00005, Rev. 4	Section 4.1.3.3, Table C-8, and Figures C1-1 and C1-3 in Operating Unit Group 10, Addendum C of this Permit.